

REMARKS

This amendment is being filed in response to the Office Action having a mailing date of October 5, 2007. Various claims are amended as shown. New claims 43-52 are added. No new matter has been added. Claims 37-42 are canceled herein without prejudice. With this amendment, claims 1-36 and 43-52 are pending in the application.

I. Discussion of the claims and cited references

The present Office Action rejected claims 1-2, 6-15, and 18-21 under 35 U.S.C. § 102(e) as being anticipated by Yang (U.S. Patent No. 7,216,172). Claims 3-5 and 16-17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Yang in view of Kirby (U.S. Patent No. 5,828,846). The present Office Action rejected claims 22-36 “for the same reasons set forth to reject[] claims 1-21” and rejected claims 37-42 for “not teach[ing] or defin[ing] any new limitations than above claims 1-21; therefore, they are rejected for similar reasons.”

For the reasons set forth below, it is kindly requested that the rejections of the claims be reconsidered and withdrawn.

A. Independent claim 1

Independent claim 1 as amended herein recites, *inter alia*, “at a network device, providing a hypertext transfer protocol (HTTP) client-side connection and a HTTP server-side connection”, “receiving at said network device via said client-side connection a communication that signals said server-side connection to close”, and “maintaining persistent, by said network device, at least the server-side connection in response to said communication received via said client-side connection.” It is respectfully submitted that Yang does not meet these limitations.

Specifically, Yang discloses a technique wherein it is the server and/or the client that performs a technique to provide persistency in an HTTP connection. Yang does not disclose, teach, or suggest a network device (that provides a client-side connection and a server-side connection in claim 1) that maintains persistency in the manner recited in claim 1.

Yang describes the following in his column 2, lines 21-41; column 5, lines 51-53; and column 8, lines 17-19 (emphasis ours):

“The present invention provides systems and methods for creating a quasi-persistent HTTP connections that overcome the limitations described above. This is accomplished by modifying the content-length key-value pair in a HTTP request or response. In particular, a computer program running on the server or client modifies the content-length key-value pair so that the content-length key-value pair has a content-length value that is large. By generating a content-length value that is large, the time that the HTTP connection remains open can be controlled and thus increased. The client or server that receives the content-length key-value pair having the large content-length value, in effect, believes that a large amount of data will be included with the request or response when, in fact, there may be little or no data to actually transfer at that point in time. As such, a quasi-persistent HTTP connection can be established between the client and the server and the length of time the quasi-persistent HTTP connection remains open can be controlled via the content-length value ... In step 204, server computer 120 generates a response header that includes a content-length key-value pair having a large content-length value ... In step 302, client computer 110 generates a POST request that includes a content-length key-value pair having a large content-length value.”

From the above-quoted passages of Yang, it is abundantly clear that it is his server computer 120 and/or his client computer 110 that performs a technique (specifically, modifying a content-length key-value pair) to establish a quasi-persistent HTTP connection. Yang is completely silent with regards to a network device, having a client-side connection and a server-side connection, that maintains the server-side connection persistent as recited in claim 1.

Furthermore, claim 1 requires that the server-side connection is maintained persistent “in response to a communication received via said client-side connection” that “signals said server-side connection to close.” It is not possible for Yang to meet this limitation. For instance, if Yang’s client modified the content-length key-value pair to extend persistency, and

then this modified content-length key-value pair is sent by Yang's client to his server, the received modified content-length key-value pair would have caused his server-side connection to remain open, rather than "signals said server-side connection to close" as required by claim 1.

While Figure 1 of Yang does show a central computer system 140, Yang mentions absolutely nothing with respect to his central computer system 140 modifying the content-length key-value pair in order to provide quasi-persistency. At most, Yang discloses in his column 5, lines 26-34 that quasi-persistent communications may pass through the central computer system 140, but does not disclose, teach, or suggest that the central computer system 140 itself performs the modification of the content-length key-value pair or maintains persistency in response to the type of communication received via the client-side connection as specified in claim 1.

Accordingly, it is respectfully submitted that claim 1 is allowable.

B. Independent claims 14, 22, 27, 31, and 37

In a manner analogous to claim 1, independent claims 14, 22, 27, 31, and 37 are amended to more particularly recite the client-side and server-side connections of a network device, and further amended to clarify that it is the network device that extends/maintains connection persistency in response to a communication/content that signals the server-side connection to close.

As previously explained above, Yang does not provide these features, since it is his client computer and/or server computer (and not some other network device) that modifies the content-length key-value pair to provide quasi-persistency. Further, the central computer system 140 of Yang is not disclosed, taught, or suggested as modifying the content-length key-value pair so as to provide quasi-persistency, and/or otherwise maintains/extends persistency in response to a communication/content that signals the server-side connection to close.

Accordingly, it is respectfully submitted that claims 14, 22, 27, 31, and 37 are allowable.

C. Dependent claims 3-4, 16-17, 23, 30, 34, 47, 49, and 52

Dependent claim 3 as amended herein recites, *inter alia*, that the server-side connection is maintained persistent ... in response to a RESET packet. Dependent claim 4 as amended herein recites, *inter alia*, that the server-side connection is maintained persistent ... in response to a FIN packet.

The present Office Action admitted on page 5 (section 12) that Yang does not disclose maintaining the server-side connection persistent in response to a RESET/FIN packet. To supply the missing teachings of Yang, the present Office Action cited Kirby. However, it is respectfully submitted that Kirby does not cure the deficiencies of Yang.

Specifically, Kirby discloses that the RESET/FIN packets are used to terminate the connection, rather than to maintain persistency. Kirby provides the following description on column 1, lines 37-40; column 4, lines 8-11; and column 4, lines 59-67 (emphasis ours):

“Either device 12 or device 26 can terminate the connection by sending a FIN (finish) packet. RST (reset) packets may also be used to control the connection ... The connection packet handler 108 watches 120 (FIG. 7) packets passing on link 20 for those of types involved in setting up and terminating connections (e.g., SYN, FIN, and RST packets) ... The packet sorter sends FIN packets to a FIN packet processor 154. The FIN packet processor sends the packets to the state processor 146. The state processor determines 184 if the FIN packet is a response to a previously allowed FIN packet (indicating that device 12 and device 26 have agreed to terminate their communications session) by looking in the log table 148 for a FIN packet from device 26. If so, the state processor modifies 186 the state table to delete the connection between device 12 and device 26.”

Accordingly from the above-quoted passages from Kirby, the FIN and reset packets of Kirby are used for terminating connections. As such, Kirby cannot meet the

limitations of claims 3-4 that require maintaining the server-side connection persistent in response to a FIN/RESET packet.

Hence, claims 3-4 are allowable.

Dependent claims 16-17, 23, 30, 34, 47, 49, and 52 contain generally similar recitations pertaining to the FIN/RESET packet as claims 3-4 (using varying language), and thus are also allowable over Kirby and Yang (whether singly or in combination) for similar reasons.

D. Dependent claims 11, 21, 26, 29, 33, and 44

Dependent claim 11 clarifies that the server-side connection is maintained persistent by the network device by changing a HTTP version value indicated in the communication to another HTTP version value that is recognizable as being associated with a persistent connection. New dependent claim 44 covers the situation where the HTTP version value is changed from version 1.0 to version 1.1. It is respectfully submitted that none of the cited references meet these limitations.

For example, page 4 (section 7) of the present Office Action broadly cited column 5, line 38 to column 10, line 38 of Yang as allegedly meeting the limitations of claim 11. However, these passages of Yang only describe the manner in which he provides quasi-persistence by modifying the content-length key-value pair. The present Office Action has not cited any specific passage of Yang that describes modification of the HTTP version value (such as from HTTP version 1.0 to HTTP version 1.1) in order to maintain persistency. Further, the present Office Action has not provided any plausible explanation as to how Yang's modification of the content-length key-value pair can be reasonably interpreted as being the same as modifying a HTTP version value.

Accordingly, it is respectfully submitted that claim 11 is allowable.

Dependent claims 21, 26, 29, 33, and 44 contain generally similar recitations pertaining to modification of a protocol version value as claim 11 (using varying language), and thus are also allowable over Yang and Kirby (whether singly or in combination) for similar reasons.

E. Dependent claims 9, 20, 25, 28, and 32

Dependent claim 9 clarifies that the server-side connection is maintained persistent by the network device by modifying a header in the communication to be unrecognizable by a server. It is respectfully submitted that none of the cited references meet these limitations.

For example, page 3 (section 6) of the present Office Action once again broadly cited column 5, line 38 to column 10, line 38 of Yang as allegedly meeting the limitations of claim 9. However, these passages of Yang only describe the manner in which he provides quasi-persistence by modifying the content-length key-value pair. The present Office Action has not cited any specific passage of Yang that describes modification of the header to a format that is unrecognizable by the server in order to maintain persistence. Further, the present Office Action has not provided any plausible explanation as to how Yang's modification of the content-length key-value pair can be reasonably interpreted as being the same as modifying a header to a format that is unrecognizable by a server. Indeed, it is respectfully submitted that a modified content-length key-value pair would indeed be recognizable by the server of Yang, since Yang relies on such recognition of the modification (increased) content-length key-value pair by the server in order to cause the server to believe that there will be a large amount of data to be sent in the communication, thereby keeping the connection persistent.

Accordingly, it is respectfully submitted that claim 9 is allowable.

Dependent claims 20, 25, 28, and 32 contain generally similar recitations pertaining to modification of a header to be unrecognizable by the server as claim 9 (using varying language), and thus are also allowable over Yang and Kirby (whether singly or in combination) for similar reasons.

F. Other claim amendments

Amendments are made to the various claims as shown to clarify that the features recited therein related to persistence pertain to the network device, thereby further distinguishing from Yang's technique where the client computer and/or the server performs operations to maintain persistence.

Independent claim 22 is amended to more closely follow current U.S. Patent Office guidelines. Independent claim 27 and its dependent claims are amended to more precisely recite the means-plus-function elements contained therein.

Other amendments are made to the claims as shown to more precisely recite the subject matter contained therein, to make the language within and between claims consistent given the amendments to the claims, to provide consistent antecedent basis, and/or to otherwise place such claims in better form. Moreover, certain claim recitations have been transferred to the new dependent claims.

II. Conclusion

If there are any informalities or questions that can be addressed via telephone, the Examiner is encouraged to contact the attorney of record (Dennis M. de Guzman) at (206) 622-4900.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

All of the claims remaining in the application are believed to be allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,
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